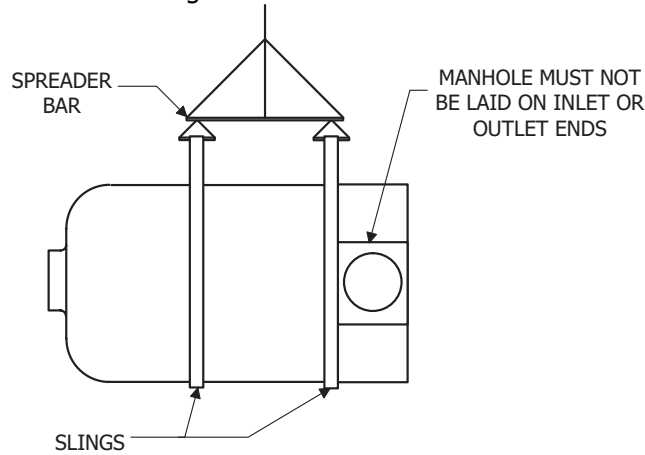




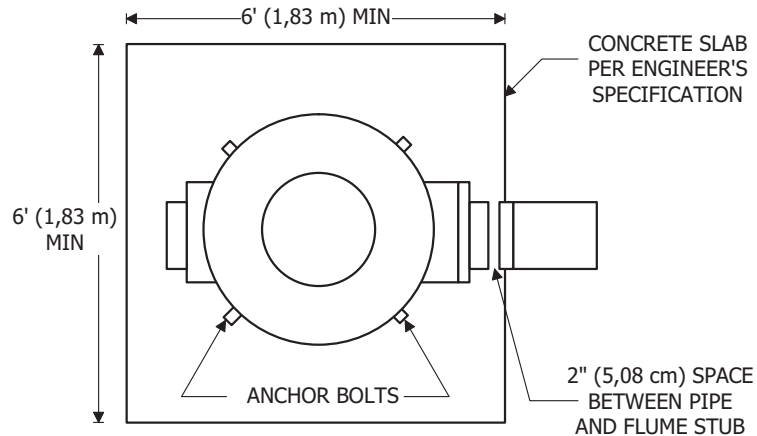
TRACOM METERING MANHOLE INSTALLATION INSTRUCTIONS

1. Follow all instructions provided by the project engineers in the form of specifications, blue prints, etc.
2. UNLOADING OF THE MANHOLE
 - a. Use a spreader bar and **FABRIC** sling for handling, as shown below. Do **NOT** use a cable or chain, as these will serrate the fiberglass.



3. SITE PREPARATION

- a. Excavation of the site should be wide enough for the manhole slab while providing a safe working area. **FOLLOW ALL APPLICABLE CITY, COUNTY, STATE, AND OSHA REGULATIONS REGARDING OPEN TRENCH CONSTRUCTION.** The concrete slab should be **level to 1/8" (0,32 cm)**. The surface of the slab should be troweled **smooth**.
- b. The slab should be of sufficient size to encompass the **ENTIRE** manhole (including the pipe stubs) and should be sized by the engineer to ensure that flotation does not occur.

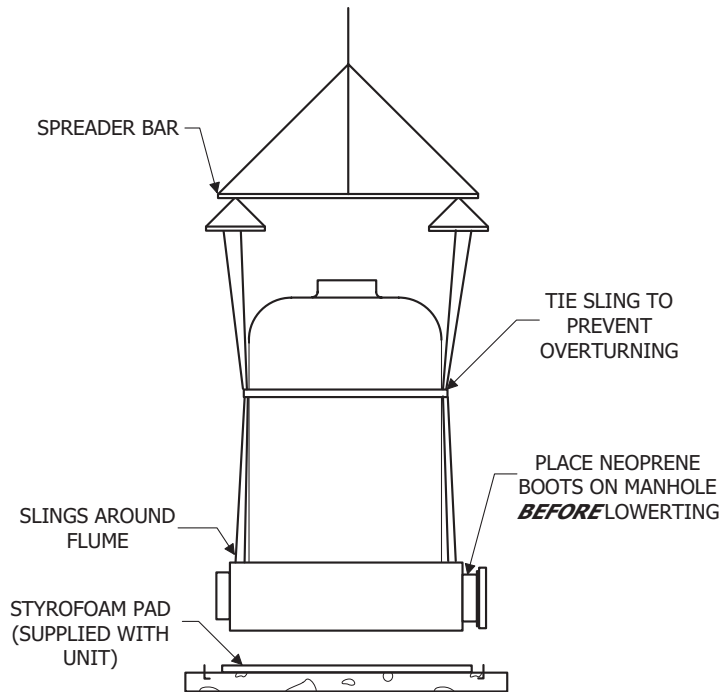


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TRACOM METERING MANHOLE INSTALLATION INSTRUCTIONS (CONTINUED)

4. PLACING THE MANHOLE ON THE SLAB

- a. Level the slab to 1/8" (0,32 cm), with grout if necessary.
- b. Place the Styrofoam pad provided with the manhole on the concrete slab in the desire location.
- c. Attach the flexible neoprene boots to the pipe stub connections on the manhole.
- d. Move and position the manhole using a fabric sling and spreader bar, as shown below.
- e. Verify the direction of flow through the flume. **DO NOT RELY SOLELY ON THE FLOW ARROW.**



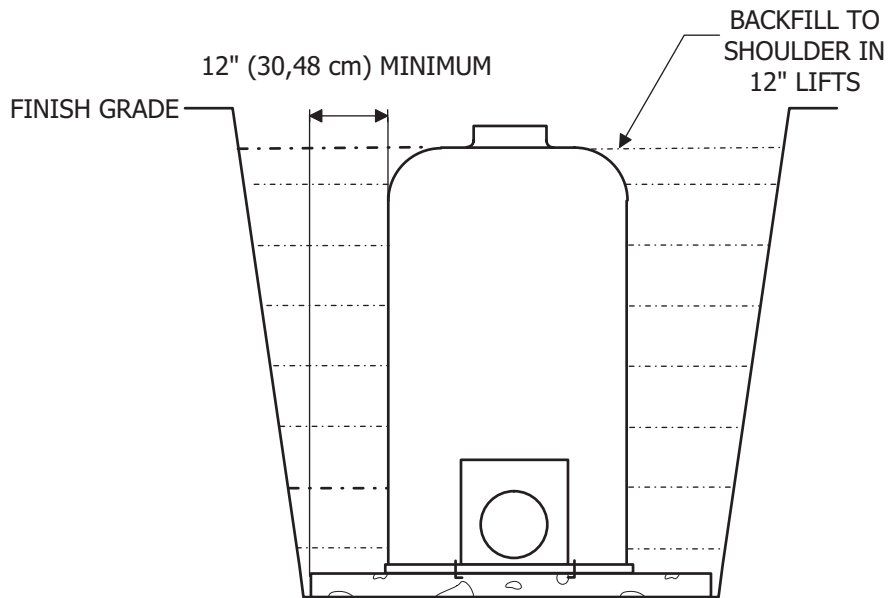
- f. Layout the anchor bolt pattern according to the engineer's specifications. Drill the manhole mounting flange and the concrete slab in accordance with the anchor bolt manufacturer's recommendations for diameter and depth. Wedge style anchor bolts are recommended.
- g. Secure the anchor bolts. **Do not tighten completely. CHECK THE LEVEL OF THE FLUME AND ADJUST THE ANCHOR BOLTS AS NECESSARY.**

5. BACKFILLING THE SITE

- a. A gravel material naturally round, 1/4" (0,64 cm) to 3/8" (0,95 cm) in size, is best for backfill material since it compacts easily.

TRACOM METERING MANHOLE INSTALLATION INSTRUCTIONS (CONTINUED)

- b. Groundwater or surface runoff should not be permitted to accumulate in an open excavation around the manhole when it has not been completely backfilled.
- c. If native soil is to be used for backfill, large soil lumps, rock, concrete, etc. over 1" (2,54 cm) in size must be removed. Backfill should be placed evenly around the manhole in maximum lifts of 12" (30,48 cm), see below.



- d. Soil conditions vary, thus knowledgeable engineering advice is recommended to assure proper backfill materials and procedures are used.

6. FINISH

- a. The void under and around the flume inside the manhole should be filled with grout to the top of the flume and should be sloped to drain towards the flume.

WARNING: METERING MANHOLES MAY BE CLASSIFIED AS CONFINED SPACE ENTRY LOCATIONS. CONSULT ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS BEFORE ENTERING.